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SOURCE Atmosfernoye Elektrichestvo, by P.N. Tverskoy, Gosmeteoizdat, 252 pp; Leningrad, 1949 (L of C No QC 961.T9).

REPORT ON TVERSKOY'S BOOK 'ATMOSPHERIC ELECTRICITY'

In this detailed statement of basic present-day knowledge on electrical phenomena in the atmosphere, special attention has been given to problems of greatest practical importance such as the conductivity and ionization state of the atmosphere and thunderstorm electricity. All phenomena are considered mainly from the physical standpoint with a minimum of mathematical theory.

Some light is thrown upon problems involved in the methodology of observations in a general fashion without entering into a description of the instruments and methods individually.

The book is the first to make liberal use of the results of studies conducted in the USSR and is intended mainly for scientific workers in the field of geophysics. However, it may also serve as a textbook for aspirants and students in the upper-division courses of universities. It may also be of interest to scientific workers and engineers who must deal with electrical phenomena occurring in the atmosphere.

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Notes on Chapter II.

In the section on radio forecasts the author stresses the importance of forecasting the condition of the ionosphere for radio communication. This very complex problem is far from solved, but fairly reliable predictions have been obtained as a result of the work conducted up to the present time. Theoretically and experimentally established laws governing the behavior of various regions of the ionosphere and their dependence upon the geographical location of the given point, and upon solar activity, have made it possible to develop a method for short-range forecasts of normal ionospheric conditions. In a number of cases, however, especially for the polar regions, forecasts of the advent of a disturbed ionospheric state, the appearance of the sporadic layer E_S, the emergence of an ionospheric storm, etc. are of particular importance. Despite a number of works in this field, little progress has been made in working out a method for forecasts of this type.

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